



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/002,287	12/05/2001	Robert K. Brimacombe	85773-387	2137
26123	7590	06/28/2005	EXAMINER	
BORDEN LADNER GERVAIS LLP WORLD EXCHANGE PLAZA 100 QUEEN STREET SUITE 1100 OTTAWA, ON K1P 1J9 CANADA			WANG, QUAN ZHEN	
			ART UNIT	PAPER NUMBER
			2633	

DATE MAILED: 06/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/002,287	BRIMACOMBE ET AL.	
	Examiner	Art Unit	
	Quan-Zhen Wang	2633	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 March 0205.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,9-11,16 and 17 is/are rejected.
- 7) ☐ Claim(s) 3-8 and 12-15 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-2, 9-11 are rejected under 35 U.S.C. 102(e) as being anticipated by Lee et al. (U.S. Patent Application Publication US 2002/0024703 A1).

Regarding claim 1, Lee teaches an optical transmission apparatus (fig. 2, 100) including a port (fig. 2, the connection line on the right hand side of element 14) for connection to an optical fiber for releasing non-visible signal light (fig. 2; the signal light; paragraph 0022, lines 4-7) transmission through the optical fiber (fig. 2, OPTICAL FIBERS), the optical transmission apparatus including visible light generator (fig. 2, 12) optically coupled to the port (fig. 2, 14) for releasing at the port visible light tracer (paragraph 0022, lines 4-11) for propagation the optical fiber with the non-visible laser light, wherein the visible light generator (fig. 2, 12) modulates at least one aspect of the visible light tracer (intensity) when least one predetermined non-visible laser light transmission condition (fiber cut) is met (paragraph 0023, lines 5-20).

Regarding claim 2, Lee further teaches the visible light generator modulates an intensity of the visible light tracer (paragraph 0023, lines 17-23).

Regarding claim 9, it is inherent that the visible light trace is a machine-readable signal.

Regarding claim 10, Lee teaches a laser light monitor (fig. 3), comprising: a) an input (fig. 3, the arrow from element 26 to element 28) for receiving a control signal indicating the occurrence of predetermined non-visible laser light transmission condition (fiber cut) in the optical fiber (paragraph 0023, lines 5-20); b) a visible light generator (fig. 3, elements 24 and 28) coupled the input modulate at least one aspect of a visible light tracer in response the control signal (paragraph 0023, lines 17-23); coupler (fig. 2, 14) including first input coupled the visible light generator (fig. 2, 12) for receiving the visible light tracer and a second input coupled to the optical fiber receiving the non-visible laser light (fig. 2, signal from element 10, paragraph 0022, lines 4-7), the coupler further including an output (fig. 2, the connection line on the right hand side of element 14), the coupler being operative to combine the visual light tracer (fig. 2, signal generated from 12) and the non-visible laser light (fig. 2, signal from 10) into combined radiation stream and release the combined radiation stream at the output (fig. 2, the connection line on the right hand side of element 14).

Regarding claim 11, Lee further teaches the visible light generator modulates an intensity of the visible light tracer (paragraph 0023, lines 17-23).

3. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al. (U.S. Patent Application Publication US 2002/0024703 A1) in view of Ohtani et al. (U.S. Patent Application Publication US 2002/0149841 A1).

Regarding claim 16, Lee teaches optical fiber transmitting simultaneously a non-visible laser light (fig. 2, the signal light, paragraph 0022, lines 4-7) and a visible light tracer (fig. 2, visible light from 12). Lee differs from the claimed invention in that Lee does not specifically teach the non-visible laser light includes Raman pump laser light. However, Ohtani teaches to couple a non-visible Raman pump laser light (fig. 4, Raman Excitation Light) into an optical fiber. Therefore, it would have been obvious for one of ordinary skill in the art at the time when the invention was made to couple the non-visible laser light including Raman pump, as it is taught by Ohtani, to the optical fiber taught by Lee and transmit the non-visible laser light including Raman pump laser with the visible light simultaneously in order to easily locate the position of a fiber-cut along the optical fiber.

4. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al. (U.S. Patent Application Publication US 2002/0024703 A1) in view of Fee et al. (U.S. Patent 5,726,788).

Regarding claim 17, Lee teaches an optical transmission apparatus, comprising:
a) port (fig. 2, the line on the right hand side of 100) conveying light, the light including non-visible laser light (fig. 2, the optical signals) and a visible light tracer (fig. 2, the visible light generated from 12); b) a visible light generator (fig. 2, 12) or producing the

Art Unit: 2633

visible light tracer, the visible light generator being optically coupled (fig. 2, 14) to the port for transmitting the visible light tracer to the port (fig. 2, the line on the right hand side of 100). Lee differs from the claimed invention in that Lee does not specifically teach an indicator optically coupled to the visible light generator, the indicator glowing when the visible light tracer is produced by the visible light generator. However, Fee et al. teaches a status indicator (fig. 5, 514) attached to an optical apparatus. Therefore, it would have been obvious for one of ordinary skill in the art at the time when the invention was made to connect the visible light taught by Lee to the status indicator taught by Fee in order to visually display the operation status of the non-visible laser light.

Allowable Subject Matter

5. Claims 3-8, 12-15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

6. Applicant's arguments filed 3/2/2005 have been fully considered but they are not persuasive.

The applicant argues that the primary reference issued to Lee et al. does not teach that the visible trace signal concurrently propagates with the non-visible laser light. However, figure 4 of Lee shown that the main optical signal (non-visible laser) and

Art Unit: 2633

visible light (visible trace) could be multiplexed together using an optical multiplexer, and, therefore, the visible trace signal can concurrently propagate with the non-visible laser light in the system.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quan-Zhen Wang whose telephone number is (571) 272-3114. The examiner can normally be reached on 8:30 AM - 5:00 PM, Monday - Friday.

Art Unit: 2633

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571) 272-3022. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

qzw
6/24/2005



JASON CHAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600